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Note by the President of the Security Council

At its 5848th meeting, held on 3 March 2008, in connection with the item on non-proliferation, the Security Council adopted resolution 1803 (2008).

In paragraph 18 of the resolution, the Security Council requested within 90 days a further report from the Director General of the International Atomic Energy Agency (IAEA) on whether the Islamic Republic of Iran has established full and sustained suspension of all activities mentioned in resolution 1737 (2006), as well as on the process of Iranian compliance with all the steps required by the IAEA Board and with the other provisions of resolutions 1737 (2006), 1747 (2007) and 1803 (2008), to the IAEA Board of Governors and in parallel to the Security Council for its consideration.

Accordingly, the President hereby circulates the report received today from IAEA (see annex).

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Enclosure*

Implementation of the NPT Safeguards Agreement and relevant provisions of Security Council resolutions 1737 (2006), 1747 (2007) and 1803 (2008) in the Islamic Republic of Iran

Report by the Director General

1. On 22 February 2008, the Director General reported to the Board of Governors on the implementation of the NPT Safeguards Agreement and relevant provisions of Security Council resolutions 1737 (2006) and 1747 (2007) in the Islamic Republic of Iran (Iran) (GOV/2008/4). This report, which covers relevant developments since that date, is submitted to the Board of Governors and to the Security Council, which, in resolution 1803 (2008) of 3 March 2008, requested the Director General to submit a further report on this matter within 90 days.

A. Current Enrichment Related Activities

2. Since the previous report, Iran has continued to operate the original 3000-machine IR-1 unit[1] at the Pilot Enrichment Plant (PEP). Installation work has continued on four other units as well.[2] On 7 May 2008, two 164-machine (IR-1) cascades of one of the four units[3] were being fed with UF_6, and another cascade of that same unit was in vacuum without UF_6. The installation of the other 15 cascades at that unit is continuing. All nuclear material at PEP, as well as all installed cascades, remain under Agency containment and surveillance. Between the physical inventory taking (PIT) on 12 December 2007 and 6 May 2008, 2300 kg of UF_6 was fed into the operating cascades. This brings

* Circulated to the Board of Governors of the International Atomic Energy Agency under the symbol GOV/2008/15.

[1] There are two cascade halls planned at FEP, Production Hall A and Production Hall B. According to the design information submitted by Iran, the original 3000-machine unit is referred to as "Unit A24", one of the eight planned units for Production Hall A.

[2] Units A25, A26, A27 and A28.

[3] Unit A26.

the total amount of UF_6 fed into the cascades since the beginning of operations in February 2007 to 3970 kg.

3. On 10 April 2008, Iran informed the Agency about the planned installation of a new generation sub-critical centrifuge (IR-3) at the Pilot Fuel Enrichment Plant (PFEP). On 19 April 2008, the Agency confirmed that two IR-3 centrifuges had been installed at PFEP. In February 2007 Agency inspectors noted that Iran had also brought 20 IR-1 centrifuges into PFEP, which were run in a 20-machine cascade for a short time, after which they were removed.

4. Between 28 January and 16 May 2008, Iran fed a total of approximately 19 kg of UF_6 into the 20-machine IR-1 cascade, the single IR-2 centrifuge, the 10-machine IR-2 cascade and the single IR-3 centrifuge at PFEP. All nuclear material at PFEP, as well as the cascade area, remains under Agency containment and surveillance.

5. The results of the environmental samples taken at FEP and PFEP indicate that the plants have been operated as declared.[4] The samples showed low enriched uranium (with up to 4.0% U-235), natural uranium and depleted uranium (down to 0.436 U-235) particles. Iran declared enrichment levels in FEP of up to 4.7% U-235. Since March 2007, fourteen announced inspections have been conducted.

B. Reprocessing Activities

6. The Agency has continued monitoring the use and construction of hot cells at the Tehran Research Reactor (TRR), the Molybdenum, Iodine and Xenon Radioisotope Production Facility (the MIX Facility) and the Iran Nuclear Research Reactor (IR-40) through inspections and design information verification (DIV). There have been no indications of ongoing reprocessing related activities at these facilities. While Iran has stated that there have been no reprocessing related research and development (R&D) activities in Iran, the Agency can confirm this only with respect to these three facilities as the provisions of the Additional Protocol are not available.

C. Heavy Water Reactor Related Projects

7. On 13 May 2008, the Agency carried out design information verification at the Iran Nuclear Research Reactor (IR-40) and noted that construction of the facility was ongoing. The Agency has continued to monitor the status of the Heavy Water Production Plant using satellite imagery.

8. On 10 May 2008, the Agency conducted a DIV at the Fuel Manufacturing Plant (FMP). Although the pellet production process for the heavy water reactor fuel is almost complete and some test pellets have been produced, the fuel rod production and fuel assembling processes are still missing some essential equipment.

[4] Results are available for samples taken up to 3 December 2007 for FEP and up to 13 March 2008 for PFEP.

D. Other Implementation Issues

D.1. Uranium Conversion

9. As of 12 May 2008, approximately 71 tonnes of uranium in the form of UF_4 had been produced since 3 February 2008. This brings the total amount of uranium in the form of UF_4 produced at the Uranium Conversion Facility (UCF) since March 2004 to 320 tonnes, all of which remains under Agency containment and surveillance. Iran has stated that it is not carrying out uranium conversion related R&D activities other than those at Isfahan.

D.2. Design Information

10. On 30 March 2007, the Agency requested Iran to reconsider its decision to suspend the implementation of the modified text of its Subsidiary Arrangements General Part, Code 3.1 (GOV/2007/22, paras 12–14), but there has been no progress on this issue.

11. In March and April 2008, Iran provided revised design information for FEP and PFEP, indicating that centrifuges in the new 18-cascade unit (A26) would be installed in FEP and that new types of centrifuge, IR-2 and IR-3, would be installed at PFEP. These changes are significant and as such should have been communicated to the Agency, in accordance with Code 3.1 of the Subsidiary Arrangements General Part, sixty days before the modifications were scheduled to be completed. The Agency was, however, able to ensure that all necessary safeguards measures, including containment and surveillance, were in place before UF_6 was fed into the newly installed centrifuges.

D.3. Other Matters

12. Since February 2008, all fuel assemblies imported from the Russian Federation for use in the Bushehr Nuclear Power Plant have remained under Agency seal.

13. On 2 April 2008, the Agency requested Iran to provide, as a transparency measure, access to additional locations related, inter alia, to the manufacturing of centrifuges, R&D on uranium enrichment, and uranium mining and milling. To date, Iran has not agreed to the Agency's request.

E. Possible Military Dimensions

14. In addition to the implementation of Iran's Additional Protocol, for the Agency to provide assurances regarding the absence of undeclared nuclear material and activities in Iran, Iran needs to, inter alia: resolve questions related to the alleged studies (GOV/2008/4, para. 35); provide more information on the circumstances of the acquisition of the uranium metal document (GOV/2008/4, para. 19); clarify procurement and R&D activities of military related institutes and companies that could be nuclear related (GOV/2008/4, paras 40–41); and clarify the production of nuclear equipment and components by companies belonging to defence industries (GOV/2004/11 para.37, GOV/2004/34 para.32).

15. During a meeting in Tehran on 21–22 April 2008, Iran agreed to address the alleged studies, the procurement and R&D activities of military related institutes and companies, and questions which had been raised in the Agency's letters of 8 February and 12 February 2008 (GOV/2008/4 para. 35) (See Annex, Section B.1). On 9 May 2008, the Agency submitted a request for additional clarifications relevant to the nature of Iran's nuclear programme (see Annex, Section B.2). Iran provided its responses to these questions on 23 May 2008, which is being assessed by the Agency.

16. At follow up meetings in Tehran on 25–30 April and 13–14 May 2008, the Agency presented, for review by Iran, information related to the alleged studies on the green salt project, high explosives testing and the missile re-entry vehicle project (See Annex, Section A). This included information which Iran had declined to review in February 2008 (GOV/2008/4, paras 35, 37–39 and 42). This information, which was provided to the Agency by several Member States, appears to have been derived from multiple sources over different periods of time, is detailed in content, and appears to be generally consistent. The Agency received much of this information only in electronic form and was not authorized to provide copies to Iran.

17. One aspect of the alleged studies refers to the conversion of uranium dioxide to UF_4, also known as green salt. A second aspect concerns the development and testing of high voltage detonator firing equipment and exploding bridgewire (EBW) detonators including, inter alia, the simultaneous firing of multiple EBW detonators; an underground testing arrangement (GOV/2008/4, para. 39); and the testing of at least one full scale hemispherical, converging, explosively driven shock system that could be applicable to an implosion-type nuclear device. A third aspect of the studies concerns development work alleged to have been performed to redesign the inner cone of the Shahab-3 missile re-entry vehicle to accommodate a nuclear warhead.

18. On 14 May 2008, Iran provided in writing its overall assessment of the documents presented to it by the Agency. Iran stated that the documents "do not show any indication that the Islamic Republic of Iran has been working on [a] nuclear weapon." Iran also stated that the documents were not authentic, that they were "forged" or "fabricated". Iran did not dispute that some of the information contained in the documents was factually accurate, but said the events and activities concerned involved civil or conventional military applications. Iran said the documents contained numerous inconsistencies and many were based on publicly available information. Iran stated that "the Islamic Republic of Iran has not had and shall not have any nuclear weapon program."

19. Concerning the documents purporting to show that Iran had been working to develop an additional capability to convert uranium dioxide to UF_4 (green salt), Iran said it would not have made sense to launch such a project as it had already acquired the necessary technology for UCF.

20. Concerning the alleged work to design and build an EBW detonator and a suitable detonator firing unit, Iran acknowledged that it had conducted simultaneous testing with two to three EBW detonators with a time precision of about one microsecond. Iran said, however, that this was intended for civil and conventional military applications. Iran further stated, inter alia, that there was no evidence in the documents presented to it to link them to Iran.

21. Concerning the documents purporting to show administrative interconnections between the alleged green salt project and a project to modify the Shahab-3 missile to carry a nuclear warhead, Iran stated that, since some of the documents were not shown to it by the Agency, it could not make an assessment of them. Although the Agency had been shown the documents that led it to these conclusions, it was not in possession of the documents and was therefore unfortunately unable to make them available to Iran.

22. Concerning six technical reports purportedly related to efforts to engineer a new payload chamber for the Shahab-3 missile re-entry vehicle, Iran stated that the files were in electronic form and could therefore have been easily manipulated. Iran also stated, inter alia, that the documents were not complete and that the report structures varied, which raised serious doubts about their authenticity.

23. The Agency is continuing to assess the information and explanations provided by Iran. However, at this stage, Iran has not provided the Agency with all the information, access to documents and access to individuals necessary to support Iran's statements. In light of the discussions on 14 May 2008, the Agency is of the view that Iran may have additional information, in particular on high explosives

testing and missile related activities, which could shed more light on the nature of these alleged studies and which Iran should share with the Agency.

24. It should be noted that the Agency currently has no information – apart from the uranium metal document – on the actual design or manufacture by Iran of nuclear material components of a nuclear weapon or of certain other key components, such as initiators, or on related nuclear physics studies. As regards the uranium metal document found in Iran, Pakistan has confirmed, in response to the Agency's request (GOV/2007/58 para.25), that an identical document exists in Pakistan.

25. Although the Agency did not detect any nuclear activities at Kolahdouz or Parchin (GOV/2005/75 para. 10, GOV/2005/87 para. 41, GOV/2005/87 para. 46, 2006/15 para. 32), the role of military related institutes, such as the Physics Research Center (PHRC), the Institute of Applied Physics (IAP) and the Education Research Institute (ERI) — and their staff — needs to be better understood, also in view of the fact that substantial parts of the centrifuge components were manufactured in the workshops of the Defence Industries Organization (GOV/2004/11 para. 37 and GOV/2004/34, para. 22). The Agency also needs to understand fully the reasons for the involvement of military related institutions in procurement for the nuclear programme.

F. Summary

26. The Agency has been able to continue to verify the non-diversion of declared nuclear material in Iran. Iran has provided the Agency with access to declared nuclear material and has provided the required nuclear material accountancy reports in connection with declared nuclear material and activities. However, Iran has not implemented the modified text of its Subsidiary Arrangements General Part, Code 3.1 on the early provision of design information.

27. The alleged studies on the green salt project, high explosives testing and the missile re-entry vehicle project remain a matter of serious concern. Clarification of these is critical to an assessment of the nature of Iran's past and present nuclear programme. Iran has agreed to address the alleged studies. However, it maintains that all the allegations are baseless and that the data have been fabricated.

28. The Agency's overall assessment of the nature of Iran's nuclear programme also requires, inter alia, an understanding of the role of the uranium metal document, and clarifications by Iran concerning some procurement activities of military related institutions, which remain outstanding. Substantive explanations are required from Iran to support its statements on the alleged studies and on other information with a possible military dimension. Iran's responses to the Agency's letter of 9 May 2008 were not received until 23 May 2008 and could not yet be assessed by the Agency. It is essential that Iran provide all requested information, clarifications and access outlined in this report without further delay. It should be emphasized, however, that the Agency has not detected the actual use of nuclear material in connection with the alleged studies.

29. Contrary to the decisions of the Security Council, Iran has not suspended its enrichment related activities, having continued the operation of PFEP and FEP and the installation of both new cascades and of new generation centrifuges for test purposes. Iran has also continued with the construction of the IR-40 reactor.

30. The Director General urges Iran to implement all measures required to build confidence in the peaceful nature of its nuclear programme, including the Additional Protocol, at the earliest possible date.

31. The Director General will continue to report as appropriate.

Annex

A. Documents shown to Iran in connection with the alleged studies

A.1. Green Salt Project

Document 1: A one page undated flowsheet purportedly originating from the Kimia Maadan Company (KM), which shows a process of batch scale conversion of UO_2 to UF_4 with a capacity of 1 tonne per year of UF_4. The document is entitled "Process Flow Diagram – Green Salt Production – Bench Scale", bears the words "Kimia Maadan Group" and "Project 5/13"[a], and includes a detailed legend of equipment and material balance information.

Document 2: A one page annotated letter of May 2003 in Farsi from an engineering company to KM requesting instructions regarding the supply of a programmable logic control (PLC) system.

A.2. High Explosives Testing

Document 1: "Analysis and Review of Exploding Bridgewire (EBW) Detonator Test Results" dated January–February 2004, comprising 11 pages in Farsi reporting on work carried out by "Project 3.12" to design and construct an EBW detonator and a suitable detonator firing unit, including testing of about 500 EBW detonators.

Document 2: One page undated document in Farsi providing text and a schematic diagram for an underground testing arrangement. The diagram depicts a 400m deep shaft located 10km from a firing control point and shows the placement of various electronic systems such as a control unit and a high voltage power generator.

Document 3: Five page document in English describing experimentation undertaken with a complex multipoint initiation system to detonate a substantial amount of high explosive in hemispherical geometry and to monitor the development of the detonation wave in that high explosive using a considerable number of diagnostic probes.

A.3. Missile Re-entry Vehicle

Document 1: One page piece of correspondence in Farsi, dated 3 March 2003, from M. Fakhrizadeh to Shahid Hemat Industrial Group (SHIG) management, referring to the "Amad Plan" and seeking assistance with the prompt transfer of data for "Project 111".

Document 2: One page letter in Farsi, dated 14 March 2004, from a "Project 110" official to Dr Kamrava advising him of the views of the project supervisors regarding the report relating to "Group E1" (part of "Project 111").

Document 3: One page undated document in Farsi providing correspondence from the "Project 111 Office" to "Engineer Fakhrizadeh, Chief, Amad Plan," referring to a meeting on 28 August 2002 and the provision of the "Project 111" progress report to a Ministry official.

Document 4: Fourteen page document in Farsi dated February–March 2003 entitled "Documentation Preliminary Training" which outlines, in both text and in copies of a presentation, the methodology to be adopted for the production and management of technical reports and documents.

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[a] The project for the construction of a UCC plant in Gchine was referred to as project 5/13 (GOV/2008/4, para. 28).

Document 5: Three page document comprising a cover letter in Farsi, dated 11 June 2002, from M. Fakhrizadeh to "Project Executive" requesting that monthly reports are to be provided to him by the 25th of each month in a specified format.

Document 6: Undated, five page document in Farsi from "Orchid Office" to "Design Management" summarizing the scientific activities of the "Project 111 Groups B1 – B6" and the "Vice Chair E."

Document 7: Comprised of four presentations in Farsi providing an overview of "Project 111" from some time before December 2002 to January 2004. The documents detail various aspects of an unidentified entity's effort to develop and construct a Shahab-3 re-entry vehicle capable of housing a new payload for the Shahab-3 missile system. The material includes a short film clip on the assembly of a dummy re-entry vehicle payload chamber.

Document 8: "Instructions for Assembling the Chamber Parts, Assembling the Payload Inside the Chamber, and Assembling the Chamber to Shahab-3 Warhead", 18 pages in Farsi, dated December 2003–January 2004, produced by Group B6 of Project 111.

Document 9: "Explosive Control System. Construction and Design Report", 48 pages in Farsi, dated December 2003–January 2004, produced by Project 111.

Document 10: "Assembly and Operating Guidelines for Explosive Control System", 17 pages in Farsi, dated December 2003–January 2004, produced by the Groups E2 and E3 of Project 111.

Document 11: "Design and Construction of Explosive Control System", 29 pages in Farsi, dated December 2003–January 2004, produced by Groups E2 and E3 of Project 111.

Document 12: "Finite Element Simulation and Transient Dynamic Analysis of the Warhead Structure", 39 pages in Farsi, dated February–March 2003, produced by Group E5 of Project 111.

Document 13: "Implementation of Mass Properties Requirements of Shahab-3 Missile Warhead with New Payload, with the Use of Nonlinear Optimization Method", 35 pages in Farsi, dated March–April 2003, produced by Group E4 of Project 111.

B. Other Questions

B.1. Questions addressed in Agency letters of 8 and 12 February 2008

1. The Agency asked about the possible involvement of an Institute of Applied Physics (IAP) staff member in Iran's work on EBW detonator; procurement attempts by this person for borohole HP (Ge) gamma spectrometers (GOV/2008/4, para. 40); and Iran's procurement attempts for spark gaps by another entity (GOV/2008/4, para. 40). Iran stated that the person concerned was not involved in work related to EBWs and that the procurement requests were related to well logging for the oil ministry. Iran denied that attempts were made to procure spark gaps by another entity. The Agency continues to assess the information provided by Iran.

2. Iran was also asked by the Agency to clarify the so-called "Project 4", which could be related to possible uranium enrichment (GOV/2008/4, para. 41). Iran repeated its earlier statements that there had never been a Project 4 and that there had not been any uranium enrichment project in Iran except that carried out by the AEOI. The Agency continues to assess the information provided by Iran.

3. The Agency asked about the following projects: "Project 5/11/1", Saadiyat Plant, Bandar Abbas; "Project 5/11/2", Conversion of yellowcake to UF_6; and "Project 5/11/5", R&D on Mining and Extraction. Iran denied the existence of these projects. The Agency continues to assess the information provided by Iran.

4. The Agency requested Iran to describe the purpose of visits abroad between 1998 and 2003 by Mr. Fakhrizadeh and other people known to be involved in Iran's nuclear programme, and to specify the persons, companies and institutes with which meetings were held. Iran acknowledged that these visits took place, but declared that none of them were related to nuclear activities, including uranium enrichment, and provided no details. On 14 May 2008, the Agency re-iterated its request for a more detailed response.

5. In response to the Agency's requests, Iran denied that procurement attempts were made for neutron sources in 2003. Iran also denied that it had attempted in 1997 to obtain training courses on neutron calculations, enrichment/isotope separation, shock wave software, neutron sources and ballistic missiles (GOV/2008/4, para. 40). The Agency had also enquired about the reasons for inclusion in the curriculum vitae of an IAP employee of a Taylor-Sedov equation for the evolving radius of a nuclear explosion ball with photos of the 1945 Trinity test. Iran indicated that the IAP scientist had been working on dimensional analysis and had included in his resume references available in open sources. The Agency was not permitted to meet with the individuals relevant to these issues and continues to assess the information provided by Iran.

B.2. Questions addressed in Agency letter of 9 May 2008

6. The Agency asked Iran for additional clarifications regarding Iran's nuclear programme. The questions concerned, inter alia:

(a) Information about a high level meeting in 1984 on reviving Iran's pre-revolution nuclear programme;

(b) Information about a letter published by the Chairman of the Expediency Council in September 2006 which makes reference to possible acquisition of nuclear weapons;

(c) Attempts by a former head of the Physics Research Centre (PHRC) and by the SHIG to procure certain nuclear use and dual use items on behalf of the Technical University and the AEOI (GOV/2008/4/ para. 18);

(d) The scope of a visit by AEOI officials to a nuclear installation in Pakistan in 1987;

(e) Information on meetings between Iranian officials and members of the supply network in 1993 in Dubai;

(f) The role of the Central Islamic Revolutionary Committee in procurement transactions with the supply network in 1989;

(g) Whether the following projects have existed or still exist, their purpose, present status and the entities involved: "Project 4/8", "Project 3.14", "Project 8", "Project 13 (Project 44)", "Group 14", "Project 10", "Project 19" and "Project 155";

(h) Supporting documents about the order of aluminium bars and sheets that were presented to the Agency on 27 January 2006 (GOV/2006/15, para. 37);

(i) The nature, intended purpose and application of the radiation monitoring equipment which a staff member of IAP attempted to acquire in 1998;

(j) information about the purpose of work done by the Pishgam company around 2000 related to the design of a PUREX based process for the AEOI; and

(k) an agreement which, according to open source information, was signed on 21 January 1990 by Iran's Minister of Defence and Armed Forces Logistics to build a 27 MW reactor in Esfahan.